

*Substitute Specification*

## CHRYSANTHEMUM PLANT NAMED '95-157-6'

Genus/species

*Dendranthemum* × *hybrida*

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Cultivar designation

'95-157-6'

Background of the Invention

10       The present invention comprises a new and distinctive chrysanthemum plant, hereinafter referred to by the cultivar name '95-157-6'. This new cultivar was the result of a cross in 1989 between *Dendranthema weyrichii* and *Dendranthema grandiflora*. More specifically, the breeding program, which resulted in the production of the new cultivar was carried out in St. Paul, Minnesota. The breeding program commenced with a female plant of a *Dendranthema*

15 *weyrichii*, which is unpatented, having the following characteristics: (a) the plant habit is prostrate and the plant spreads via rhizomes to form a large mat after the first year; (b) the plant dimensions are that the plant has a diameter of about 1.5' and is about 5-6" tall; (c) the plant is hardy in zones 4-9 (Southeast)/Zone 10 (west); (d) the flower of the plant is a single daisy, having light lavender colored ray florets and central disc florets with yellow pollen; (e) the plant

20 has leaves that are dark green in color, with a very shiny leaf surface (glossy), and glabrous leaf margins that are deeply incised; and (f) the plants tends to rosette, needs cold treatment to flower consistently, flowering can be sporadic with gaps in the plant architecture and the plant is an obligate short-day plant. The male plant used to initiate the breeding program was a *Dendranthema grandiflora*, which is unpatented, having the following characteristics: (a) the

25 plant habit is cushion; (b) the plant dimensions are that the plant is similar to other cushion types commercially available, such as, but not limited to the variety, 'Shasta' (U.S. Plant Patent No. 9,314); (c) the plant is hardy in zones 6-9 (Southeast)/Zone 10 (west); (d) the flower is a single or duplex daisy, possibly orange or bronze ray florets, central disc florets with yellow pollen; (e) the plant has leaves that are similar to other cushion series of chrysanthemums; and (f) the plant

30 is a facultative short-day plant. The resulting seeds, identified as '90-287-194' were collected. In 1991, a plant of '90-287-194' which is unpatented, was crossed as the male parent with plants

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identified as '77-AM3-3', a proprietary inbred parental selection, which is unpatented, as the female parent and the resulting seeds, identified as cross number '92-279-2' were collected. In 1994, a plant of '92-279-2', which is unpatented, was crossed as the male parent with plants of the cultivar 'Baby Tears' (unpatented) as the female parent and the resulting seeds, identified as cross number '95-157', were collected. In 1995, seedlings of the cross '95-157' were germinated and the flowering progeny evaluated. '95-157-6' was the sixth plant from the cross and was selected in the fall of 1995.

Asexual reproduction of the new cultivar by terminal or stem cuttings in St. Paul, Minnesota, U.S.A. has demonstrated that the characteristics of the new cultivar as herein described are firmly fixed and are retained through successive generations of such asexual reproduction.

Summary of the Invention

It was found that the cultivar of the present invention:

(a) exhibits extreme hybrid vigor;

(b) develops, in its second and subsequent years after planting, when grown in the fall under natural daylength and without the application of growth regulators, into a flower herbaceous shrub having a plant height of from about 1.8 to about 2.25 feet and a spread form about 2.4 to about 5.0 feet,

(c) exhibits, in its second and subsequent years after planting and during the fall season (August-October), a massive floral display,

(d) displays flowers which are slightly toned with grey, giving the ray florets a slightly altered coloration,

(e) exhibits superior winter hardiness, including frost tolerance, and

(f) exhibits self-pinching.

The '95-157-6' cultivar has not been observed under all possible environmental conditions to date. Accordingly, it is possible that the phenotype may vary somewhat with variations in the environment, such as temperature, light intensity, and day length.

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When the new cultivar of the present invention is compared to 'Stephanie' (U.S. Plant Patent No. 9,445), it is found to exhibit a more spreading and prolific habit accompanied with a massive floral display in its second and subsequent years after planting. Reference is made to Table 1 below, which compares certain characteristics of '95-157-6' to 'Stephanie'.

Table 1

Characteristics	'95-157-6'	'Stephanie'
Capitulum form and type	Pentaplex daisy	Flat daisy
Plant Height	About 18 to 19 inches (first year); about 1.8 to about 2.25 feet (second year)	10 to 12 inches
Branching Pattern	Spreading and very prolific	Spreading and very prolific
Flowering Response	6 weeks	7 weeks
Inflorescence Diameter	7.1 cm	5.8 to 6.1 cm
Ray florets, color, mature	White	White

Brief Description of the Photographs

The accompanying photographs show as nearly true as it is reasonably possible to make the same color illustrations of this type, typical flower and foliage characteristics of the new cultivar. The plants were grown in a greenhouse at St. Paul, Minnesota, USA.

Figure 1 shows an adaxial and abaxial view of the leaf shape of chrysanthemum variety '95-157-6'.

Figure 2 shows the breeding history of chrysanthemum variety '95-157-6'.

Figure 3 is a color photograph of chrysanthemum variety '95-157-6' after two years of growth.

*Substitute Specification*Detailed Botanical Description

- The chart used in the identification of colors described is the 1966 R.H.S. Colour Chart of The Royal Horticultural Society, London, England. The color values were determined on
- 5    October 15, 1999 in St. Paul, Minnesota. The readings were taken between 1:30 and 2:00 PM under approximately 2500 footcandles of light. The plants were produced from cuttings from stock plants and were grown under greenhouse conditions in St. Paul, Minnesota comparable to those used in commercial practice while utilizing a soilless growth medium and maintaining temperatures of approximately 72°F during the day and approximately 65°F during the night.
- 10   The plants described were one and two years of age from rooted cuttings.

## Propagation

- |                    |                         |
|--------------------|-------------------------|
| Type               | Herbaceous stem cutting |
| Time of rooting    | About 1 week            |
| 15   Rooting habit | Vigorous                |

## Botanical Classification

*Dendranthemum × hybrida*

## Commercial Classification

Chrysanthemum hybrid

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## Plant Description

- |  |  |
|--|--|
| Appearance, shape  | Spherical mound  |
| Appearance, growth habit   | Cushion  |
| Appearance, growth rate/vigor                                    | Vigorous   |
| 25   Plant height  | About 18 to about 19 inches (first year)<br>About 1.8 to about 2.25 feet (second year) |
| Lateral branch length  | 1 to 2.5 feet  |
| Quantity of lateral branches after removal<br>of apical meristem | One per node   |
| 30   Stem color  | RHS Paris Green 58/1   |

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## Foliage Description

	Number of leaves per plant	Greater than 8,000 (second year)
	Number of leaves per lateral branch	5 to 20
	Leaf arrangement	Alternate
5	Leaf size, fully expanded, length	7.8 cm
	Leaf size, fully expanded, width	4.8 cm
	Leaf shape	Ovate and narrowing towards base
	Leaf apex	Mucronulate
	Leaf base	Cuneate
10	Leaf margin	Incised (Mulberry-like incisions)
	Leaf texture	Mildly hirsute
	Petiole length	2.2 cm
	Color, young foliage adaxial surface	RHS Scheeles Green 860/2
	Color, young foliage abaxial surface	RHS Spinach Green o960/2
15	Color, fully expanded foliage abaxial surface	RHS Spinach Green o960
	Color, fully expanded foliage abaxial surface	RHS Spinach Green o960/1 to RHS Spinach Green o960/3
	Color, venation adaxial surface	RHS Spinach Green o960/2
	Color, venation abaxial surface	RHS Spinach Green o960/3
20	Color, petiole	RHS Scheeles Green 860/1
	Inflorescence Description	Head (composite), pentaplex daisy
	Flowering response	About 6 weeks (under short days)
	Quantity of inflorescences	About 1,000 (first year)
25		About 3,000 (second year)
	Inflorescence size, diameter	7.1 cm
	Inflorescence size, depth (height)	3.4 cm
	Inflorescence size, diameter of disc	1.0 cm
	Opening Inflorescences, bud shape	Dome shaped to upright tubular
30	Opening Inflorescences, bud size, length	0.6 cm
	Opening Inflorescences, bud size, width	0.7 cm

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	Opening Inflorescences, bud color	RHS Creamy White
	Ray florets, shape	Linear lanceolate
	Ray florets, size, length	2.7 cm
	Ray florets, size, width	0.6 cm
5	Ray florets, apex	Retuse
	Ray florets, base	Attenuate
	Ray florets, margin	Entire
	Ray florets, texture	Glabrous
	Ray florets, aspect	From about 45° vertical to slightly pendant 45°
10	Number of ray florets per inflorescence	About 119
	Ray florets, color, when opening, adaxial surface	RHS Sap Green 62/3
	Ray florets, color, when opening, abaxial surface	RHS Uranium Green 63/3
15	Ray florets, mature, adaxial surface	RHS White
	Ray florets, mature, abaxial surface	RHS White
	Ray florets, fading to	RHS White
	Disc florets, size, length	0.7 cm
	Disc florets, size, width	0.2 cm
20	Number of disc florets per inflorescence	About 100
	Disc florets, color, immature	RHS Straw Yellow 604
	Disc florets, color, mature	RHS Chinese Yellow 606
	Peduncle, aspect, strength	Stiff
	Peduncle, aspect, angle to stem	45°
25	Peduncle, length, first peduncle	3 cm
	Peduncle, length, fourth peduncle	4.6 cm
	Peduncle, texture	Midly hirsute
	Peduncle, color	RHS Viridian Green 55/3
	Reproductive organs, androecium, floret location	Disc florets
30	Anther color	RHS Canary Yellow 2/1

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	Pollen abundance	Abundant
	Pollen, color	RHS Buttercup Yellow 5
	Reproductive organs, gynoecium, florete location	Disc/ray florets
5	Style color	RHS Buttercup Yellow 5/2
10	Stamen Description	Stamens are located within each individual disk floret. Each stamen is borne on a filament that, when mature (dehiscent with pollen shedding longitudinally along the long axis of the anther), places the stamens above the stigma (i.e., the top portion of the pistil).
15	Pistil Number	Each ray floret possesses one pistil (there are approximately 60 per inflorescence). Likewise, each disk floret also possesses a pistil (there are approximately 191 per inflorescence). Therefore, the total number of pistils/inflorescence is 251 (60+191). The size of the pistil (length) is approximately 1 cm.
20	Disease Resistance	None Known as '95-157-6' has not been tested for any diseases.
25	Seed Production and Fruit	About 152 ovules/flower. The fruit is an achene, a dry, indehiscent fruit with a single locule and a single seed, and with the seed attached to the ovary wall at a single point. The achene does not have any pappus of awns for bristles; its general shape is a half-inflated football oval with pointed ends. Seed size is about 0.2-0.5 cm in length and about 0.1-0.2 cm in width. The surface texture is ridged.
30		The color designation for the seed is RHS Brown Group 200D.

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	Fragrance	Fragrance is noticeable when handling or bruising the foliage.
5	Longevity of the Bloom	Flower longevity is temperature dependent. Under normal conditions in the field, during the fall season, inflorescences will typically last about 2-4 plus weeks.
10	Winter Hardiness	Hardy in zones 3-10 in uncovered field conditions without the need for added protection such as snow fences, mulch, etc.
15	Frost Tolerance	Yes, extends blooming season to the first freeze in the north (In zones 3-4 the first frost usually takes place between September 1-15. In zones 3-4, the first freeze usually takes place between October 1-20.
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